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ABSTRACT

Home environment factors which influence school learning were reviewed. Socioeconomic status (SES) has explained only about ten percent of the variance in achievement. Also, there is very little that can be done to change SES over a short period of time. Dave and Wolf studied what parents do, rather then who they are; they investigated the environmental process variables: family's work habits; academic guidance and support; stimulation; language development; and academic aspirations and expectations. These variables correlated highly (+.80) with achievement in grades 4-5. The Dave method of studying home environment rated 21 process variables on a nine-point scale, using in-home observation and parent interviews. Bloom used a 14-item checklist based on Dave's scale; its correlation with achievement in grades 4-6 was .60 to .70. The Dolan Home Educational Environment Scale correlated about .50 with elementary school achievement. It was recommended that the Bloom version of the Dave scale or Dolan's scales, rather than SES, be used by the National Assessment of Educational Progress (NAEP) to assess home environment. This is significant because not only schools and ability, but families, too, affect achievement. (GDC)

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The Home Environment and School Learning

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THE HOME ENVIRONMENT AND SCHOOL LEARNING

Socio-economic Status

For many years, educators and sociologists have been aware that the home environment of the school children has a significant effect on their level of learning in the schools. It was especially clear that the level of education of the parents has an effect on the children's learning. Similarly, the occupational status of the parents was found to have an effect on their children's learning in the schools. Somewhat related to the above was the income level of the parents with somewhat higher achievement for the children of wealthier families and lower achievement for the children of the poorer families. This type of study has been done for at least 60 years in the United States. Where these separate measures (education of parents, occupational status of parents, and income level of the parents) were combined into what was called "socio-economic status", the typical correlation between this index and the children's school achievement was about +.30. That is approximately 10% of the variation in the children's school achievement could be attributed to the socio-economic status of the parents.

This index of socio-economic status has been used in many studies of the relation between the home environment and the children's school achievement. It is a very simple index and there is little difficulty in getting direct or related information on a rough index of the parent's socio-economic status. Only rarely are parents unwilling to provide information

on the number of years of school and college they have had; most parents are willing to provide information on the occupations they are currently engaged in or their economic status. For all practical purposes, a 5 or 6 step classification of the parent's socio-economic status is all that is needed to relate the parents' status to their children's school achievement (grade point average or achievement test scores).

What is lacking in this index is that a correlation of +.30 is not a very useful relationship since so much of the variation in school achievement is not accounted for (e.g. 90% of the variation in school achievement is independent of this predictor.) However, the most damaging characteristic of this socio-economic measure is that there is little or nothing the parents or the schools can do to improve the situation. Socio-economic status is what it is and neither the parents, the schools, or the Gods are likely to change it - at least over the short run.

What Parents Do

A very different approach to the study of the effects of the home environment on school learning (and verbal ability) was undertaken by Dave (1963) and Wolf(1964). They began with the premise that it is what parents do rather than who they are that accounts for the learning development of the children in the early years of school. Through interviews with the parents as well as observational techniques they attempted to investigate the environmental process variables in the homes. That is, the interactions between children and their parents in relation to learning in the school (and in the home).

Dave hypothesized on the basis of the literature that the home environment relevant to school achievement might be studied in terms of the following process variables:

1. Work habits of the family - the degree of routine in the home management, the emphasis on regularity in the the use of space and time, and the priority given to schoolwork over other pleasurable activities.
2. Academic guidance and support- the availability and quality of the help and encouragement parents give the child for his or her schoolwork and the conditions they provide to support the child's schoolwork.
3. Stimulation in the home - the opportunity provided by the home to explore ideas, events, and the larger environment.
4. Language development - opportunities in the home for development of correct and effective language usage.
5. Academic aspirations and expectations - the parents' aspirations for the child, the standards they set for the child's school achievement, and their interest in and knowledge of the child's school experiences.

These variables were broken down into more specific process characteristics, and ratings were made on the basis of interview and observational data. When these variables were related to total score on a battery of school achievement tests (at grade 4 or 5) the overall correlations were found to be very high (+.80). It is clear that this index of the home environment is far more predictive of school achievement than is the best intelligence or aptitude test. The result of a series of studies on the home environment suggest that the home has greatest influence on the language development of the child and his or her general ability to learn. The home has least influence on specific skills primarily taught in the school such as spelling or arithmetic.

The Dave (and Wolf) studies of the home have been replicated in the U. S. and in a number of other countries with very similar results (Marjoribank, 1979). Some of the specific sub-variables in the Dave method have

also been used to some extent in the International Studies of Educational Achievement (IEA). This approach to the study of the home environment makes it clear that parents with very different levels of education, income, or occupational status can provide very stimulating home environments which support and encourage the learning of their children. The research of Dave and Wolf and many others that follow them demonstrate that it is what the parents do in the home rather than their status characteristics which are the powerful determinants in the home environment as related to the school achievement of their children.

Methods of measuring the home environment

The Dave method of studying the home environment was based on 21 process variables. Each of these processes was rated on a 9 point scale based on both observations in the home and questions asked of one or both the parents. Typically, the interview and observations took 1 to 2 hours for each home.

The Dave method has also been used (with some details omitted) in a brief self-report by one or both parents. A checklist of home environmental processes consisting of 14 items has been used by Bloom. This can be read by an interviewer (or by the parents). For each item, the interviewer reads the item and if necessary explains it briefly. If it is something that the parents believe is rarely done or emphasized in the home, a 0 is recorded. If it is something that is frequently done or is emphasized in the home, a + is recorded. If it is something that is especially emphasized in the home, a

++ is recorded. The number of plus marks recorded should correlate about +.60 to +.70 with measures of school learning in grades 4 to 6. (See Home Environment Processes That Influence School Learning in Bloom, 1981, pp. 94-101)

A more detailed questionnaire has been developed by Lawrence Dolan for his study of the home environments of the children in the Child-Parent Centers he studied. This questionnaire was filled out by the parents - usually in group sessions. This questionnaire method (See Dolan Home Educational Environment Scale, 1980, pp. 337-341) This questionnaire method yields correlations of about +.50 with the children's school achievement in the elementary schools.

It is recommended that the SES* measure of the home environment not be used for National Assessment of Educational Progress purpose. The SES measure shows a deceptively low effect of the home environment on student achievement in the schools. It would seem that the Bloom version of the Dave scale or the Dolan scale would be possible candidates for the NAEP purposes. Both could be administered by telephone or by mail with some minor changes. If there is serious interest in using a home environment measure, these two scales might be tried out by personal interview methods as contrasted with telephone or mail approaches. The best test of the alternative methods of gathering information about the home is that they should yield as substantial correlations with student achievement measures as do the personal interview methods.

* - Socio-economic status

Why use a home environment scale in the NAEP program?

The home environment has a strong positive or negative effect on school achievement at the elementary school level. Unless the school personnel understand the effect of the home environment on school achievement, they are likely to believe that it is the school alone (or student aptitude or innate ability) that determines the level of student achievement. Thus the school personnel may attribute too much or too little to their effect on student achievement. Most schools can greatly improve school learning in their students if they can involve the parents in support of their children's school learning.

One of our Ph. D. students completed a recent study in which over a 6 month period he and his staff were able to raise student achievement in reading and arithmetic by 1 standard deviation. The staff helped the parents improve their interest in and support of their childrens'school achievement. They also used the Dave scales to measure the changes in the home environment over a 6 month period. This was one of many demonstrations that the home environment is very powerful in its effects on school learning and that the home environment can be improved to a significant degree - especially during the early school years. (See Marjoribanks, 1979).

I would recommend that the home environment scale be used with selected samples of student-parents primarily to establish the effect of the home on particular measures of school achievement developed by the NAEP. Perhaps 25 samples of 50 students in different parts of the country might serve the purpose. In most of these samples the results should

demonstrate the usual correlations of +.50 to +.80 between the home environment measures and school learning at the elementary school level. I do not think that there is much point in establishing the effect of the home environment on the entire elementary school NAEP sample.

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